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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,384

06/09/2006

Clive Erskine

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EXAMINER

MI, QIUWEN

ART UNIT

PAPER NUMBER

1655

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,384	Applicant(s) ERSKINE, CLIVE	
	Examiner QIUWEN MI	Art Unit 1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17, 18, 20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15, 17, 18, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Applicant's amendment in the reply filed on 10/21/08 is acknowledged, with the cancellation of Claims 16, 19, 22, and 23. Claims 1-15, 17, 18, 20, and 21 are pending. Claims 1-14 are withdrawn. **Claims 15, 17, 18, 20, and 21 are examined on the merits.**

Any rejection that is not reiterated is hereby withdrawn.

Claim Rejection 112, 1st

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 15, 17, 18, 20, and 21 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This rejection is maintained for reasons of record set forth in the Office Action mailed out on 3/5/2008, repeated below. Applicants' arguments filed have been fully considered but they are not deemed to be persuasive.

Claim 15 recites "contacting the extractant with **a plant material** to form an extract including compounds from the plant material".

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To provide adequate written description and evidence of possession of a claimed invention, the specification must provide sufficient distinguishing identifying characteristics of the invention. The factors to be considered include disclosure of complete or partial structure, physical and/or chemical properties, functional characteristics, structure/function correlation, methods of making the claimed product, or any combination thereof. In the instant case, the invention only provides the description of some Australian native plant genus such as *Callitris*, *Tasmannia*, *Leptospermum*, *Prostanthera*, *Rhodamnia*, *Eremophila*, *Melaleuca*, *Phebalium*, *Eucalyptus*, *Acacia*, and some examples of species, and no description regarding the whole plant kingdom, which encompasses at least 350,000 species, according to Wikipedia online, or a representative number of the whole plant kingdom, is being disclosed in the specification. It is not clear exactly what other plant materials Applicant is referring to, except the samples given in page 8 of the specification. Accordingly, in the absence of sufficient recitation of the plant materials, the specification does not provide adequate written description of the claimed invention.

Vas-Cath Inc. v. Mahurkar, 19USPQ2d 1111, clearly states “applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the ‘written description’ inquiry, whatever is now claimed. The specification does not “clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is now is claimed.” (See Vas-Cath at page 1116). As discussed above, the skilled artisan cannot envision the detailed compound being

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claimed, and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the compound. Adequate written description requires more than a mere statement of the total amount of the plant material being used. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

The description requirement of the patent statute requires a description of an invention, not an indication of a result that one might achieve if one made that invention. See *In re Wilder*, 736, F. 2d 1516, 1521, 222 USPQ 369, 372-73 (Fed. Cir. 1984) (affirming rejection because the specification does "little more than outline [goals] appellants hope the claimed invention achieves and the problems the invention will hopefully ameliorate.") Accordingly, it is deemed that the specification fails to provide adequate written description for the claims and does not reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed had possession of the claimed invention.

All other cited claims depend directly or indirectly from rejected claims and are, therefore, also, rejected under U.S.C. 112, first paragraph for the reasons set forth above.

Applicant argues that "Applicants respectfully traverse this rejection. It would be known to one skilled in the art that "plant material" refers to any plant material regarding the extraction technique described in the specification: For example, from the 2002 Review Article "Extractions with superheated water" by Roger Smith (Journal of Chromatography 975:31-46), the phrase "plant material" is used throughout to refer to a number of plant species (please see attached). Plant material is defined in the specification on page 9, lines 10 and 11 where it is

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stated that the "plant material may include the whole or any part of a plant, including leaves, flowers, trunks, butts and roots." In the MPEP 2163(I), it is stated that to "satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention." It seems clear therefore that one skilled in the art would know that plant material should be considered any whole plant extirpated from the soil, and that extraction processes using this plant material can recover "compounds produced by plants" including "pesticides, food additives, pharmaceuticals, cosmetics, cleaning and disinfecting agents and the like." Applicants therefore respectfully request withdrawal of this rejection.

This is not found persuasive. It is not that one of the ordinary skills in the art would not understand what "plant materials" means. The problem is the Applicant is only in possession of plant materials from *Callitris*, *Tasmannia*, *Leptospermum*, *Prostanthera*, *Rhodamnia*, *Eremophila*, *Melaleuca*, *Phebalium*, *Eucalyptus*, *Acacia*, and but not in possession of the whole plant kingdom. Thus the rejection is maintained for the reason of the record.

Claim Rejections –35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 15, 17, 18, 20, and 21 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Grinda et al (US 4,698,222) in view of WO 01/15534, further in view of Hamanaka (JP 2002206099).

This rejection is maintained for reasons of record set forth in the Office Action mailed out on 3/5/2008, repeated below. Applicants' arguments filed have been fully considered but they are not deemed to be persuasive.

Grinda et al. disclose a method of extracting a natural insecticidal substance from a plant containing the insecticidal substance which comprises contacting powdered dry parts of the plant with an alkyl or alkenyl ester of a fatty acid, in which the ester moiety contains 1-16 carbons (see claim 1). Grinda et al. also teach that the ester is methyl, ethyl, propyl, isopropyl, butyl, hexyl, and octyl etc (see claim 3). Grinda et al. further teach that the product serves as spray for plants in order to protect them against insect (col 3, lines 5-10). It is inherent that the fatty acid ester is produced by esterification of an animal or vegetable oil. Grinda et al also teach using sodium lauryl sulfonate as emulsifier (Example 5) and using nonyl-phenyl-polyoxyethylene as surface active agent in Example 8 (thus surfactant). At last Grinda et al teach 350 g of chloroform (thus solvent) was added to 200 g of derris, reduced to a fine powder (plant material).

Grinda et al. do not teach a composition further comprising a pesticidally active polar oil, the plant material *Tasmannia stipitata*, or contacting plant material with surfactant.

WO 01/15534 discloses an insecticidal composition that includes *Tasmannia stipitata* extract in combination with an insecticidally effective oil such as vegetable oil (polar oil) etc.

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The *Tasmannia stipitata* extract enhances the insecticidal activity of the oil (see Abstract). WO 01/15534 also teaches that the composition is applied to the insect population by spraying (claim 8), and the extract was dissolved in ethanol (solvent) (page 3, lines 10-15). WO 01/15534 further teaches that the combination of *Tasmannia stipitata* extract and insecticidally effective vegetable oil have been found to have unexpected synergistic activity as insecticides (page 1, lines 25-30).

Hamanaka teaches extracting *alpinia speciosa* component for use as insect repellent, involves immersing *Alpinia speciosa* in a solution containing surfactants, at specified temperature by mixing, stirring, stirring and shaking frequently (see Title). Hamanaka also teaches that the method enables to provide an efficient extraction of *Alpinia speciosa* in reliable manner. The product containing the *Alpinia speciosa* extract has excellent stability (see Abstract, full translation has been attached).

It would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to use the pesticidally active vegetable oil (polar oil), solvent ethanol, and plant material *Tasmannia stipitata* from WO 01/15534 in the invention of Grinda et al since WO 01/15534 teaches that the combination of *Tasmannia stipitata* extract and insecticidally effective vegetable oil have been found to have unexpected synergistic activity as insecticides. Since both of the inventions teach pesticides from plant material individually in the art, and since both of the compositions yielded beneficial results in pest control, one of ordinary skill in the art would have been motivated to make the modifications.

It would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to use the method of immersing plant material in a solution containing surfactant from Hamanaka to make insect repellent since Hamanaka teaches that the method

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provides an efficient extraction of plant material in reliable manner and the product containing the plant material has excellent stability. Since Hamanaka yielded beneficial results in making insect repellent, one of ordinary skill in the art would have been motivated to make the modifications.

From the teachings of the references, it is apparent that one of the ordinary skills in the art would have had a reasonable expectation of success in producing the claimed invention.

Thus, the invention as a whole is *prima facie* obvious over the references, especially in the absence of evidence to the contrary.

Applicant argues that “Applicants respectfully traverse this rejection. WO 01/15534 does not teach a composition comprising a plant extract and an extractant, the extractant including a fatty acid ester and/or a non-sulfonated triacyl glycerol. WO 01/15534 does not teach contacting a plant material with a fatty acid ester or a non-sulfonated triacylglycerol, nor does it teach contacting a plant material with a surfactant, nor does it teach contacting a plant material with a polar or non- polar oil that is pesticidally active. Hamanaka does not teach a composition including a non- sulfonated triacyl glycerol and/or fatty acid ester, a surfactant, and a polar or non-polar oil that is pesticidally active. Furthermore, Hamanaka does not teach contacting a plant material with a non-sulfonated triacyl glycerol and/or fatty acid ester, either alone or in combination with a surfactant, in order to form a plant extract. Moreover, Hamanaka does not teach contacting a plant material with a polar or non-polar oil that is pesticidally active, either alone or in combination with a surfactant, in order to form a plant extract” (page 10, last paragraph bridging page 11). Applicant further argues that “Hamanaka teaches the use of an

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aqueous or water-soluble extractant with a surfactant to effect the extraction of compounds from *Alpina speciosa*. In contrast, the extractant of the current application includes a fatty acid ester and/or a non-sulfonated triacyl glycerol, a surfactant and a polar or non-polar pesticidally active oil. The person of ordinary skill in the art would recognize that the results of modification to an extraction process involving an aqueous or water-soluble extractant (such as that described by Hamanaka) cannot be extrapolated reliably to an extraction process involving an oleaginous extractant (such as that described by the present application). Accordingly, the results of the use of a surfactant in an extractant including fatty acid esters and/or non-sulfonated triacyl glycerols and a pesticidally active oil are not predictable in view of Hamanaka” (page 12, 2nd paragraph).

First of all, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Secondly, Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

Applicant argues that “As such, the Applicants respectfully submit that the teachings of Grinda et al. in view of WO 01/15534, and further in view of Hamanaka do not teach or suggest the present invention” (page 11, 2nd paragraph). Applicant further argues that “Specifically,

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Grinda teaches the use of a fatty acid ester to extract compounds from plant material. A surfactant is optionally added to the composition after extraction has been affected. That surfactant cannot be used to extract compounds from the plant material as per the proposed claim because in Grinda it is added after extraction has been completed” (page 11, 3rd paragraph).

This is not found persuasive. As pointed out above, Hamanaka teaches extracting *alpinia speciosa* component for use as insect repellent, involves immersing *Alpinia speciosa* in a solution containing surfactants. It would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to use the method of immersing plant material in a solution containing surfactant from Hamanaka to make insect repellent since Hamanaka teaches that the method provides an efficient extraction of plant material in reliable manner and the product containing the plant material has excellent stability. Since Hamanaka yielded beneficial results in making insect repellent, one of ordinary skill in the art would have been motivated to make the modifications.

Applicant argues that “WO 01/15534 provides no teaching on how to form a plant extract beyond "the extract of *Tasmannia stipitata* is preferably prepared by solvent extraction of the new leaves, new stems and berries" (see page 2, lines 15-17). WO 01/15534 does not provide teachings that suggest the use of a polar or non-polar oil that is pesticidally active to extract plant compounds as required by the claim. In light of the failure of WO 01/15534 to provide any teachings on how to form a plant extract, the Applicants respectfully submit that the person of ordinary skill in the art would not be motivated to combine the teachings of WO 01/15534 with the those of Grinda *et al.* to arrive at the present invention. Even if the person of ordinary skill in the art was motivated to combine the teachings WO 01/15534 in light of Grinda, the combined

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teachings would not yield the invention according to the current application” (page 11, last paragraph bridging page 12).

This is not found persuasive. WO 01/15534 discloses an insecticidal composition that includes *Tasmannia stipitata* extract in combination with an insecticidally effective oil such as vegetable oil (polar oil) etc. WO 01/15534 teaches the *Tasmannia stipitata* extract enhances the insecticidal activity of the oil. In addition, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of invention. In addition, KSR forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See the recent Board decision *Ex parte Smith*, --USPQ2d--, slip op. at 20 (Bd. Pat. App. & Interf. June 25, 2007) (citing KSR, 82 USPQ2d at 1396) (available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd071925.pdf>).

Applicant argues that “Hamanaka teaches the use of an aqueous or water-soluble extractant with a surfactant to effect the extraction of compounds from *Alpina speciosa*. In contrast, the extractant of the current application includes a fatty acid ester and/or a non-sulfonated triacyl glycerol, a surfactant and a polar or non-polar pesticidally active oil. The person of ordinary skill in the art would recognize that the results of modification to an extraction process involving an aqueous or water-soluble extractant (such as that described by Hamanaka) cannot be extrapolated reliably to an extraction process involving an olegineous extractant (such as that described by the present application). Accordingly, the results of the use

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of a surfactant in an extractant including fatty acid esters and/or non-sulfonated triacyl glycerols and a pesticidally active oil are not predictable in view of Hamanaka” (page 12, 2nd paragraph).

Applicant's arguments have been fully considered but they are not persuasive, and therefore the rejections in the record are maintained.

Conclusion

No claim is allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qiuwen Mi whose telephone number is 571-272-5984. The examiner can normally be reached on 8 to 5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on 571-272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QM

/Michael V. Meller/

Primary Examiner, Art Unit 1655